Course: High Performance Computing Lab

Practical No 1

PRN: 22510003

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Batch: B5

Title: Introduction to OpenMP

Problem Statement 1 – Demonstrate Installation and Running of OpenMP code in C

Code:

A screen shot of a computer program

AI-generated content may be incorrect.

Output :

A screen shot of a computer

AI-generated content may be incorrect.

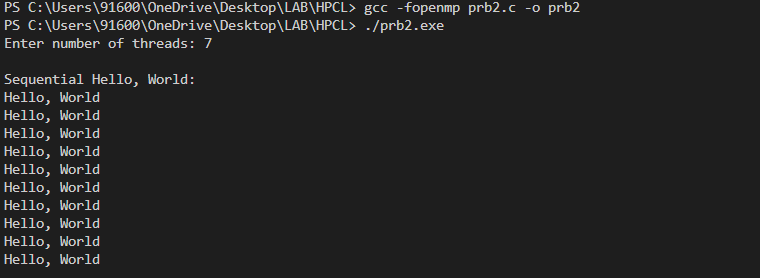
Problem Statement 2 – Print ‘Hello, World’ in Sequential and Parallel in OpenMP

Code snapshot:

A screen shot of a computer program

AI-generated content may be incorrect.

Output snapshot:



A screen shot of a computer

AI-generated content may be incorrect.

Analysis:

In sequential all run in a sequential manner so the order is in a synchronous manner but in case of parallel the order of execution is changed

GitHub Link: make a public repository upload code of an assignment and paste its link here.

Problem statement 3: Calculate theoretical FLOPS of your system on which you are running the above codes.

Code :

A screen shot of a computer program

AI-generated content may be incorrect.

Output :

A screen shot of a computer screen

AI-generated content may be incorrect.

Elaborate the parameters and show calculation.

A black screen with white text

AI-generated content may be incorrect.

FLOPS=Cores×Clock Speed (Hz)×FLOPs/Cycle

**Realistic FLOPS (using physical cores=2)**

FLOPS=47.92 GFLOPS​

**Optimistic FLOPS (using logical processors = 4)**

95.84 GFLOPS​